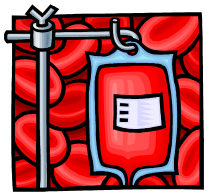
Anemia

What is anemia?



Anemia is a condition in which you have less than the normal amount of red blood cells (RBCs) or hemoglobin (the protein that carries oxygen).

How does it occur?

There are many forms of anemia. These include:

- iron deficiency anemia
- hemolytic anemia
- vitamin B-12 deficiency anemia
- folic acid deficiency anemia
- anemias caused by inherited diseases
- anemia caused by chronic disease.

Different forms of anemia have different causes.

Iron deficiency anemia:

Your body needs iron to make hemoglobin. Iron deficiency anemia is the most common form of anemia. It may be caused by:

- lack of iron in the diet
- blood loss.

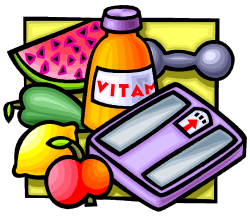
Women may develop this kind of anemia due to menstrual blood loss. Pregnant women may have this form of anemia because the growing fetus draws upon the mother's iron stores for development of red blood cells and other tissues. In men, the most common cause is loss of blood from the digestive tract, as can occur with ulcers or colon cancer.

Hemolytic anemia:

This kind of anemia occurs when red blood cells are destroyed or damaged by:

infection
drugs
inherited conditions.

Vitamin B-12 deficiency anemia:



This type of anemia occurs because of a lack of vitamin B-12, which is needed for production of RBCs. Except for some vegetarians who do not get enough B-12 from the foods they eat, it usually develops because the stomach or intestines cannot absorb the vitamin. For example, a disorder called pernicious anemia results from the inability of the digestive tract to absorb the vitamin.

Folic acid deficiency anemia:

Anemia due to a lack of folic acid in the diet is similar to B-12 deficiency anemia. This anemia is common in:

alcoholics
pregnant women
people with intestinal absorption problems
people taking certain daily medications.

Anemia caused by an inherited disease:

The most common among these types of anemia are sickle cell disease and thalassemia.

Sickle cell disease occurs mostly in black people. The RBC's have an abnormal form of hemoglobin that causes the cells to be shaped like a crescent or sickle. The cells are damaged or destroyed as they pass through the blood vessels. This causes anemia, blocks blood flow in small vessels, and may result in sickle cell crisis, a painful condition that can produce organ damage and even death.

Thalassemias are caused by a hemoglobin defect. The defect may cause abnormal RBCs and low hemoglobin levels. Thalassemias most commonly affect people of Mediterranean descent. Some types, however, affect people whose ancestors are

from Africa, Asia, India, and the South Pacific. Most forms of thalassemia are mild, but some forms cause disease in children and may result in death before adulthood.

Anemia caused by chronic disease:

Anemia caused by chronic disease is common in people, especially older adults, who have:

- cancer
- leukemia
- inflammatory diseases such as rheumatoid arthritis
- ongoing infections
- kidney disease.

What are the symptoms?

Mild anemia usually does not produce symptoms.

With more severe anemia, you may have symptoms such as:

- weakness
- fatigue
- pale skin, gums, skin creases, and nailbeds.

Other symptoms of worsening anemia include:

- lightheadedness
- rapid heartbeat
- shortness of breath
- fainting
- chest pain
- heart failure.

Jaundice (yellow skin and eyes) may be a symptom of hemolytic anemia.

How is it diagnosed?

Your health care provider will review your symptoms and examine you.

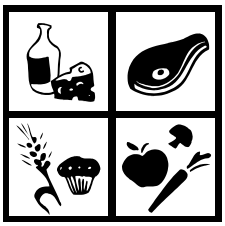
A complete blood count (CBC) will confirm anemia and show how severe it is. Other blood tests may be needed to find out what type

of anemia you have.

How is it treated?

The treatment depends on the type of anemia. Your provider will do a blood count regularly to see how well treatment is working.

Iron deficiency anemia:



If there is no underlying disease causing blood loss, your provider will prescribe iron supplements and/or a diet of foods rich in iron. Only rarely are iron shots needed.

Vitamin B-12 deficiency anemia:

If you have this form of anemia because your stomach does not absorb vitamin B-12 well, the usual treatment is a shot of vitamin B-12 once a month.

Folic acid deficiency anemia:

Folic acid deficiency anemia is usually treated by taking folate tablets daily. If the underlying problem is a severe intestinal absorption problem, shots may be given. If the condition developed because you are an alcoholic, you should stop drinking.

Anemia caused by inherited RBC diseases:

Sickle cell anemia usually requires frequent, complex treatments. Sickle cell crisis requires IV fluids, rest, pain relief, and sometimes a blood transfusion.

The treatment for thalassemias depends on how severe the anemia is, your age, and the risk involved in your having blood transfusions. (Even though donated blood is carefully screened there is always a small risk of getting blood-borne diseases such as hepatitis or AIDS.)

Anemia caused by chronic disease:

The effects of this type of anemia tend to be mild. For certain conditions, such as chronic kidney disease, your provider may prescribe regular shots of a substance to stimulate your body to produce red blood cells.

How long will the effects last?

The symptoms of mild, treatable anemias, such as iron deficiency anemia, respond quickly to treatment and improve in just a few days.

The symptoms of chronic anemias, such as sickle cell anemia, come and go. Anemia that occurs with a chronic disease usually gets better or worse as the disease gets better or worse.

How can I take care of myself?

Follow your health care provider's advice for treating your anemia and any underlying cause.

If your anemia is caused by a lack in your diet, eating foods rich in the missing nutrient will help prevent a recurrence.

To prevent the complications of vitamin B-12 deficiency anemia, get the recommended course of vitamin B-12 shots.

If you have sickle cell disease, it is important not to get dehydrated (that is, not to lose too much body fluid). Dehydration can trigger a sickle cell crisis.

Genetic counseling is important for families with inherited anemias.